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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,176	05/24/2007	Haiko Adolf	2003P17895WOUS	5892

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SIEMENS CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
170 WOOD AVENUE SOUTH  
ISELIN, NJ 08830

EXAMINER
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GONZALEZ QUINONES, JOSE A

ART UNIT	PAPER NUMBER
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2834

MAIL DATE	DELIVERY MODE
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08/05/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,176	<b>Applicant(s)</b> ADOLF ET AL.	
	<b>Examiner</b> JOSE A. GONZALEZ QUINONES	<b>Art Unit</b> 2834	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20060811</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on August 11, 2006, is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the axis of gravity and the stressed state range (2mm and 5mm) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 22-23 and 28-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims 22-23 and 28-29 contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not support the word: **contact point** (as in Claim 22-23 and 28-29).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The term "**axis of gravity**" in claims 22-23 and 28-29 is a relative term which renders the claim indefinite. The term "**axis of gravity**" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The drawing does not show: **axis of gravity** on (as in Claim 22-23 and 28-29).

***Claim Rejections - 35 USC § 102***

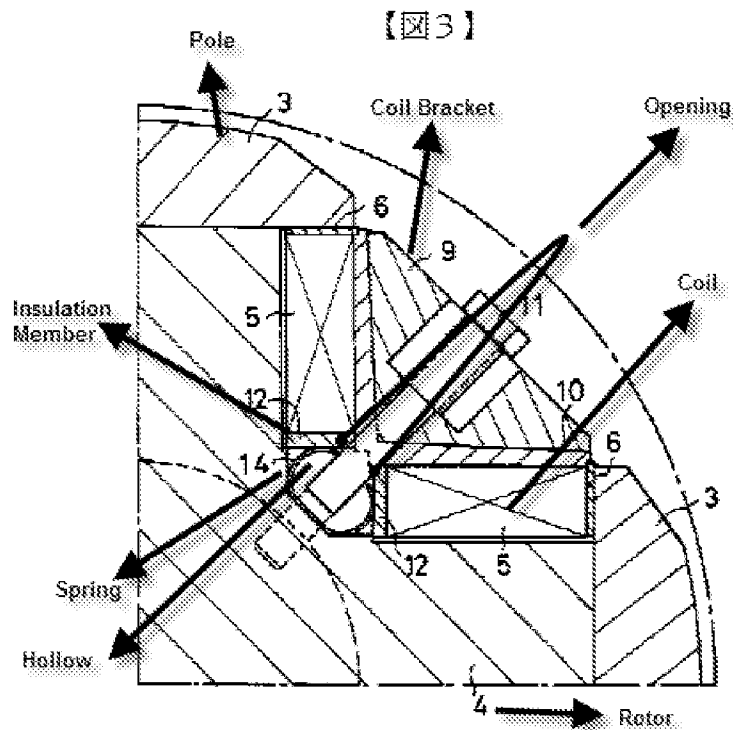
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-19 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Horikiri et al. (JP 11069681 A).

**As to claim 11 and 15**, Horikiri et al. teaches rotor body (4) having a central axis arranged coaxial with a rotational axis (2) of the machine; a pole shoe (3) arranged on the rotor body (4); a field coil (5) extending along the axis of the a rotor body (4) having a portion of the a field coil (5) arranged between a portion of the a rotor body (4) and a portion of the pole shoe (3); and a spring element (14) that exerts a spring force against the field coil (5) forcing the field coil (5) against the pole shoe (3), the spring element (14) having a hollow cross section with an interior portion arranged between the a field coil (5) and the a rotor body(4), wherein an axis of the spring (14) cross section is parallel to the rotor axis (2), and the interior portion of the hollow spring element (14) forms an axial cooling channel of the machine as shown in figure 3. (See Figure 3 below)



**As to claim 12**, Horikiri et al. teaches wherein the entire a field coil (5) is arranged between a portion of the a rotor body (4) and a portion of the pole shoe (3) as shown in figure 3. (See Figure 3 above)

**As to claim 13**, Horikiri et al. teaches wherein the spring is a bent leaf spring (14) as shown in figure 3. (See Figure 3 Above)

**As to claim 14 and 16**, Horikiri et al. teaches wherein the spring (14) has an essentially U-shaped cross section having two limbs like extensions and the field coil (5) is forced against the associated pole shoe (3) by one of the two limbs of the essentially U-shaped section as shown in figure 2. (See Figure 3 in above)

**As to claim 17**, Horikiri et al. teaches wherein the spring (30) has two essentially U-shaped sections which partially overlap to form essentially an O-shape having an opening at one point as shown in figure 3. (See figure 3 in previous Page 3)

**As to claim 18**, Horikiri et al. teaches wherein two field coils(5) are forced against the associated pole shoe (3) by the spring (14) and the opening in the O-shaped spring is arranged such that it points towards a coil support (9) arranged between the two field coils (5) as shown in figure 3. (See figure 3 in previous Page 3)

**As to claim 19**, Horikiri et al. teaches wherein the spring (14) is fixed to the a rotor body (4) by a fixing device on a side of the O-shaped spring opposite the opening in the spring (14) as shown in figure 3. (See Figure 3 in previous Page 3).

**As to claim 25**, Horikiri et al. teaches first spring leg configured to contact a first field coil of the rotor (4) or an insulting block (12) of the first field coil; a second spring leg configured to contact a second field coil of the rotor (4) arranged approximately 90° from the first field coil or an insulting block (12) of the second field coil; and a spring (14) remainder portion spanning between the first and second spring legs configured to contact the rotor (4) and with a provision for accepting a securing device to secure the hollow spring to the rotor (4), wherein the first and second spring legs are in a proximity with one another such that in a stressed state the cross sectional profile of the hollow spring is configured essentially as an O- shape forming an interior portion of the hollow spring where a cooling medium of the salient- pole machine flows as shown in figure 3. (See Figure 3 in previous Page 3)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20-21 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horikiri et al. (JP 11069681 A) as applied in claim 19 and claim 25 above, and further in view of Segawa (PG Pub 2004/0163879 A1).

**As to claim 20-21 and 26-27**, Horikiri et al. has been discussed above but fails to disclose wherein the spring has a spring stiffness of between approximately 1 and 4 N/mm.

However Segawa discloses spring stiffness of 1N/mm to 20 N/mm.

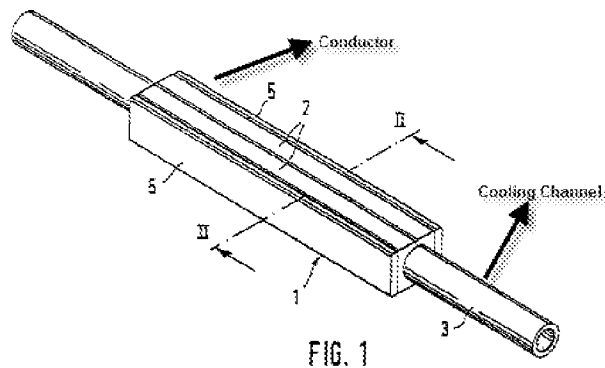
It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Horikiri et al. by use wherein the spring has a spring stiffness of between approximately 1 and 4 N/mm as taught by Segawa to provide an effective low spring constant.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horikiri et al. (JP 11069681 A) as applied in claim 23 above, and further in view of Arz et al. (6,741,152).



**As to claim 24**, Horikiri et al. has been discussed above but fails to disclose a wherein the field coil comprises a cooling channel oriented essentially radially and in connection with the axial cooling channel where a cooling medium flows.

However Arz et al. teaches a conductor as a (coil) comprises a cooling channel (3) oriented essentially radially and in connection with the axial cooling channel (3) where a cooling medium flows as shown in figure 1. (See Figure 1 Below)



It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Horikiri et al. by use a coil comprises a cooling channel oriented essentially radially and in connection with the axial cooling channel where a cooling medium flows as taught by Segawa to reduce heat temperature.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSE A. GONZALEZ QUINONES whose telephone number is (571)270-7850. The examiner can normally be reached on 1 st week Monday to Friday 7:30 AM to 5:00 PM and 2nd week Monday to Thursday 7:30 AM to 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen P. Leung can be reached on 571-272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quyen Leung/  
Supervisory Patent Examiner, Art Unit 2834

/JOSE A GONZALEZ QUINONES/  
Examiner, Art Unit 2834  
July 24, 2009

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